

**In the Claims:**

1. (Canceled)
2. (Original) ~~A method according to Claim 1 further comprising:~~  
A computerized method of determining parameters for chemical synthesis comprising:  
accepting a user identification of a target chemical;  
displaying a listing of reagent chemicals that are used to synthesize the target chemical, in response to the user identification of the target chemical;  
accepting user ~~[[input]]~~ selection from the listing of reagent chemicals, to order the target chemical~~[[,]]~~ and/or the reagent chemicals that are used to synthesize the target chemical ~~and/or the equipment that is used to synthesize the target chemical;~~ and  
~~electronically ordering generating an electronic order for the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.~~
3. (Currently Amended) A method according to Claim ~~[[1]]~~ 2 wherein the accepting a user identification of a target chemical is preceded by:  
entering into a database, a plurality of target chemicals, a plurality of corresponding listings of reagent chemicals that are used to synthesize the plurality of target chemicals, ~~a plurality of corresponding listings of equipment that is used to synthesize the plurality of target chemicals~~ and a plurality of corresponding listings of procedures that are used to synthesize the plurality of target chemicals by reacting the corresponding reagent chemicals ~~in the corresponding equipment~~ according to the corresponding procedure.
4. (Canceled)

5. (Currently Amended) A method according to Claim [[1]] 2 wherein the accepting a user identification of a target chemical comprises accepting a user identification of a target chemical by chemical formula, chemical structure, chemical compound name and/or CAS number.

6. (Currently Amended) A method according to Claim [[1]] 2 wherein the accepting a user identification of a target chemical comprises:

displaying a listing of target chemicals that match [[the]] a user query; and  
accepting a user selection of a target chemical from the listing of target chemicals that match the user query.

7. (Currently Amended) ~~A method according to Claim 1 wherein the accepting a user identification of a target chemical comprises:~~

A computerized method of determining parameters for chemical synthesis comprising:

accepting a user identification of a reaction type;  
displaying a listing of target chemicals that are synthesized using the reaction type; [[and]]

accepting a user selection of a target chemical from the listing of target chemicals that are synthesized using the reaction type; and

displaying a listing of reagent chemicals that are used to synthesize the target chemical and/or a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical.

8. (Currently Amended) A method according to Claim [[1]] 2 wherein the following is performed between the accepting a user identification of a target chemical and the displaying a listing of reagent chemicals:

displaying a listing of procedures that can be used to synthesize the target chemical; and

accepting a user selection of a procedure from the listing of procedures that can be used to synthesize the target chemical.

9. (Currently Amended) ~~A method according to Claim 1 wherein the following is performed between the accepting and the displaying:~~

A computerized method of determining parameters for chemical synthesis comprising:

accepting a user identification of a target chemical;

accepting a user selection of a desired quantity of the target chemical; ~~[[and]]~~

scaling ~~[[the]]~~ a listing of ~~[[the]]~~ reagent chemicals ~~[[so as]]~~ that are used to synthesize the desired quantity of the target chemical; and

~~wherein the displaying comprises:~~

displaying a scaled listing of the reagent chemicals that are used to synthesize the desired quantity of the target chemical, ~~a listing of equipment that is used to synthesize the desired quantity of the target chemical~~ and a listing of a procedure that is used to synthesize the desired quantity of the target chemical by reacting the reagent chemicals ~~in the equipment~~ according to the procedure, in response to the user identification of the target chemical and the user selection of the desired quantity of the target chemical.

10. (Currently Amended) ~~A method according to Claim 1 wherein the accepting a user identification of a target chemical comprises:~~

A computerized method of determining parameters for chemical synthesis comprising:

displaying a prioritized listing of target chemicals that match ~~[[the]]~~ a user query; ~~[[and]]~~

accepting a user selection of a target chemical from the prioritized listing of target chemicals that match the user query; and

displaying a listing of reagent chemicals that are used to synthesize the target chemical and/or a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical.

11. (Currently Amended) A method according to Claim ~~[[1]]~~ 2 wherein the following are performed between accepting a user identification of a target chemical ~~comprises~~ and displaying a listing of reagent chemicals:

accepting user identification of a chemical;

displaying a listing of procedures that use the chemical as a reagent chemical;

and

accepting a user selection of a procedure from the listing of procedures that use the chemical as a reagent chemical; and

wherein displaying a listing of reagent chemicals comprises displaying a listing of reagent chemicals that are used to synthesize the chemical according to the procedure that was selected.

12-17. (Canceled)

18. (Currently Amended) A computerized method of obtaining materials for chemical synthesis comprising:

~~electronically ordering~~ generating an electronic order for a target chemical[[,]] and/or reagent chemicals that are used to synthesize the target chemical ~~and/or~~ equipment that is used to synthesize the target chemical, from an electronically displayed listing of the reagent chemicals that are used to synthesize the target chemical, ~~of the equipment that is used to synthesize the target chemical~~ and of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals ~~in the equipment~~ according to the procedure, in response to user input to order the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical ~~and/or the equipment that is used to synthesize the target chemical.~~

19. (Currently Amended) A method according to Claim 18 wherein the ~~electronically ordering~~ generating an electronic order comprises:

~~electronically ordering~~ generating an electronic order for a kit of the reagent chemicals that are used to synthesize the target chemical.

20. (Currently Amended) A method according to Claim 18 wherein the ~~electronically ordering generating an electronic order~~ comprises:

~~electronically ordering generating an electronic order~~ for a kit of [[the]] equipment that is used to synthesize the target chemical.

21-24. (Canceled)

25. (Currently Amended) ~~A system according to Claim 24 further comprising:~~

A system for determining parameters for chemical synthesis comprising:

means for accepting a user identification of a target chemical;

means for displaying a listing of reagent chemicals that are used to synthesize the target chemical, in response to the user identification of the target chemical;

means for accepting user [[input]] selection from the listing of reagent chemicals, to order the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical; and

means for electronically ordering generating an electronic order for the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical, in response to the user input to order the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical and/or the equipment that is used to synthesize the target chemical.

26. (Currently Amended) A system according to Claim [[24]] 25 further comprising:

a database; and

means for entering into the database, a plurality of target chemicals, a plurality of corresponding listings of reagent chemicals that are used to synthesize the plurality of target chemicals, ~~a plurality of corresponding listings of equipment that is used to synthesize the plurality of target chemicals~~ and a plurality of corresponding listings of procedures that are used to synthesize the plurality of target chemicals by reacting the

corresponding reagent chemicals ~~in the corresponding equipment~~ according to the corresponding procedure.

27. (Canceled)

28. (Currently Amended) A system according to Claim ~~[[24]]~~ 25 wherein the means for accepting a user identification of a target chemical comprises means for accepting a user identification of a target chemical by chemical formula, chemical structure, chemical compound name and/or CAS number.

29. (Currently Amended) A system according to Claim ~~[[24]]~~ 25 wherein the means for accepting a user identification of a target chemical comprises:

means for displaying a listing of target chemicals that match ~~[[the]]~~ a user query; and

means for accepting a user selection of a target chemical from the listing of target chemicals that match the user query.

30. (Currently Amended) ~~A system according to Claim 24 wherein the means for accepting a user identification of a target chemical comprises:~~

A system for determining parameters for chemical synthesis comprising:

means for accepting a user identification of a reaction type;

means for displaying a listing of target chemicals that are synthesized using the reaction type; ~~[[and]]~~

means for accepting a user selection of a target chemical from the listing of target chemicals that are synthesized using the reaction type; and

means for displaying a listing of reagent chemicals that are used to synthesize the target chemical and/or a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical.

31. (Currently Amended) A system according to Claim ~~[[24]]~~ 25 further comprising:

means for displaying a listing of procedures that can be used to synthesize the target chemical; and

means for accepting a user selection of a procedure from the listing of procedures that can be used to synthesize the target chemical, wherein the means for displaying a listing of reagent chemicals is responsive to the means for accepting a user selection of a procedure.

32. (Currently Amended) ~~A system according to Claim 24 further comprising:~~

A system for determining parameters for chemical synthesis comprising:

means for accepting a user identification of a target chemical;

means for accepting a user selection of a desired quantity of the target chemical; ~~[[and]]~~

means for scaling ~~[[the]]~~ a listing of ~~[[the]]~~ reagent chemicals ~~[[so as]]~~ that are used to synthesize the desired quantity of the target chemical; and

~~wherein the means for displaying comprises:~~

means for displaying a scaled listing of the reagent chemicals that are used to synthesize the desired quantity of the target chemical, ~~a listing of equipment that is used to synthesize the desired quantity of the target chemical~~ and a listing of a procedure that is used to synthesize the desired quantity of the target chemical by reacting the reagent chemicals ~~in the equipment~~ according to the procedure, in response to the user identification of the target chemical and the user selection of the desired quantity of the target chemical.

33. (Currently Amended) ~~A system according to Claim 24 wherein the means for accepting a user identification of a target chemical comprises:~~

A system for determining parameters for chemical synthesis comprising:

means for displaying a prioritized listing of target chemicals that match ~~[[the]]~~ a user query; [[and]]

means for accepting a user selection of a target chemical from the prioritized listing of target chemicals that match the user query; and

means for displaying a listing of reagent chemicals that are used to synthesize the target chemical and/or a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical.

34. (Currently Amended) A system according to Claim 24 ~~wherein the means for accepting a user identification of a target chemical comprises~~ 25 further comprising:

means for accepting user identification of a chemical;

means for displaying a listing of procedures that use the chemical as a reagent chemical; and

means for accepting a user selection of a procedure from the listing of procedures that use the chemical as a reagent chemical; and

wherein the means for displaying a listing of reagent chemicals comprises means for displaying a listing of reagent chemicals that are used to synthesize the chemical according to the procedure that was selected.

35-40. (Canceled)

41. (Currently Amended) A system for obtaining materials for chemical synthesis comprising:

an electronically displayed listing of reagent chemicals that are used to synthesize a target chemical, ~~of equipment that is used to synthesize the target chemical~~ and of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals ~~in the equipment~~ according to the procedure; and

means for ~~electronically ordering~~ generating an electronic order for the target chemical ~~[[,]]~~ and/or the reagent chemicals that are used to synthesize the target chemical ~~and/or the equipment that is used to synthesize the target chemical~~, from the electronically displayed listing of the reagent chemicals that are used to synthesize the target chemical, ~~of the equipment that is used to synthesize the target chemical~~ and of the procedure that is used to synthesize the target chemical by reacting the reagent chemicals ~~in the equipment~~ according to the procedure, in response to user



input to order the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical ~~and/or the equipment that is used to synthesize the target chemical.~~

42. (Currently Amended) A system according to Claim 41 wherein the means for ~~electronically ordering~~ generating an electronic order comprises:

means for ~~electronically ordering~~ generating an electronic order for a kit of the reagent chemicals that are used to synthesize the target chemical.

43. (Currently Amended) A system according to Claim 41 wherein the means for ~~electronically ordering~~ generating an electronic order comprises:

means for ~~electronically ordering~~ generating an electronic order for a kit of [[the]] equipment that is used to synthesize the target chemical.

44. (Canceled)

45. (Currently Amended) ~~A computer program product according to Claim 44 further comprising:~~

A computer program product that determines parameters for chemical synthesis, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to accept a user identification of a target chemical;

computer-readable program code that is configured to display a listing of reagent chemicals that are used to synthesize the target chemical, in response to the user identification of the target chemical;

computer-readable program code that is configured to accept user [[input]] selection from the listing of reagent chemicals, to order the target chemical[[,]] and/or the reagent chemicals that are used to synthesize the target chemical ~~and/or the equipment that is used to synthesize the target chemical;~~ and

computer-readable program code that is configured to ~~electronically order~~  
generate an electronic order for the target chemical[[,]] and/or the reagent chemicals  
that are used to synthesize the target chemical ~~and/or the equipment that is used to~~  
~~synthesize the target chemical~~, in response to the user input to order the target  
chemical[[,]] and/or the reagent chemicals that are used to synthesize the target  
chemical ~~and/or the equipment that is used to synthesize the target chemical~~.

46. (Currently Amended) A computer program product according to  
Claim [[44]] 45 further comprising:

computer-readable program code that is configured to enter into a database, a  
plurality of target chemicals, a plurality of corresponding listings of reagent chemicals  
that are used to synthesize the plurality of target chemicals, ~~a plurality of~~  
~~corresponding listings of equipment that is used to synthesize the plurality of target~~  
~~chemicals~~ and a plurality of corresponding listings of procedures that are used to  
synthesize the plurality of target chemicals by reacting the corresponding reagent  
chemicals ~~in the corresponding equipment~~ according to the corresponding procedure.

47. (Canceled)

48. (Currently Amended) A computer program product according to  
Claim [[44]] 45 wherein the computer-readable program code that is configured to  
accept a user identification of a target chemical comprises computer-readable program  
code that is configured to accept a user identification of a target chemical by chemical  
formula, chemical structure, chemical compound name and/or CAS number.

49. (Currently Amended) A computer program product according to  
Claim [[44]] 45 wherein the computer-readable program code that is configured to  
accept a user identification of a target chemical comprises:

computer-readable program code that is configured to display a listing of  
target chemicals that match [[the]] a user query; and

computer-readable program code that is configured to accept a user selection  
of a target chemical from the listing of target chemicals that match the user query.

50. (Currently Amended) ~~A computer program product according to Claim 44 wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises:~~

A computer program product that determines parameters for chemical synthesis, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to accept a user identification of a reaction type;

computer-readable program code that is configured to display a listing of target chemicals that are synthesized using the reaction type; ~~[[and]]~~

computer-readable program code that is configured to accept a user selection of a target chemical from the listing of target chemicals that are synthesized using the reaction type; and

computer-readable program code that is configured to display a listing of reagent chemicals that are used to synthesize the target chemical and/or a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical.

51. (Currently Amended) A computer program product according to Claim ~~[[44]]~~ 45 further comprising:

computer-readable program code that is configured to display a listing of procedures that can be used to synthesize the target chemical that was identified; and

computer-readable program code that is configured to accept a user selection of a procedure from the listing of procedures that can be used to synthesize the target chemical, wherein the computer-readable program code that is configured to display a listing of reagent chemicals is responsive to the computer-readable program code that is configured to accept a user selection of a procedure.

52. (Currently Amended) ~~A computer program product according to Claim 44 further comprising:~~

A computer program product that determines parameters for chemical synthesis, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to accept a user identification of a target chemical;

computer-readable program code that is configured to accept a user selection of a desired quantity of the target chemical; [[and]]

computer-readable program code that is configured to scale [[the]] a listing of [[the]] reagent chemicals [[so as]] that are used to synthesize the desired quantity of the target chemical; and

~~wherein the computer-readable program code that is configured to display comprises:~~

computer-readable program code that is configured to display a scaled listing of the reagent chemicals that are used to synthesize the desired quantity of the target chemical, ~~a listing of equipment that is used to synthesize the desired quantity of the target chemical~~ and a listing of a procedure that is used to synthesize the desired quantity of the target chemical by reacting the reagent chemicals ~~in the equipment~~ according to the procedure, in response to the user identification of the target chemical and the user selection of the desired quantity of the target chemical.

53. (Currently Amended) ~~A computer program product according to Claim 44 wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises:~~

A computer program product that determines parameters for chemical synthesis, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to display a prioritized listing of target chemicals that match [[the]] a user query; [[and]]

computer-readable program code that is configured to accept a user selection of a target chemical from the prioritized listing of target chemicals that match the user query; and

computer-readable program code that is configured to display a listing of reagent chemicals that are used to synthesize the target chemical and/or a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical.

54. (Currently Amended) A computer program product according to Claim 44 ~~wherein the computer-readable program code that is configured to accept a user identification of a target chemical comprises~~ 45 further comprising:

computer-readable program code that is configured to accept user identification of a chemical;

computer-readable program code that is configured to display a listing of procedures that use the chemical as a reagent chemical; and

computer-readable program code that is configured to accept a user selection of a procedure from the listing of procedures that use the chemical as a reagent chemical; and

wherein the computer-readable program code that is configured to display a listing of reagent chemicals comprises computer-readable program code that is configured to display a listing of reagent chemicals that are used to synthesize the chemical according to the procedure that was selected.

55-60. (Canceled)

61. (Currently Amended) A computer program product that obtains materials for chemical synthesis, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to ~~electronically order~~ generate an electronic order for a target chemical [[,]] and/or reagent chemicals that

are used to synthesize the target chemical ~~and/or equipment that is used to synthesize the target chemical~~, from an electronically displayed listing of the reagent chemicals that are used to synthesize the target chemical, ~~of the equipment that is used to synthesize the target chemical~~ and of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals ~~in the equipment~~ according to the procedure, in response to user input to order the target chemical ~~[[,]]~~ and/or the reagent chemicals that are used to synthesize the target chemical ~~and/or the equipment that is used to synthesize the target chemical~~.

62. (Currently Amended) A computer program product according to Claim 61 wherein the computer-readable program code that is configured to electronically generate an electronic order comprises:

computer-readable program code that is configured to ~~electronically order generate an electronic order for~~ a kit of the reagent chemicals that are used to synthesize the target chemical.

63. (Currently Amended) A computer program product according to Claim 61 wherein the computer-readable program code that is configured to electronically generate an electronic order comprises:

computer-readable program code that is configured to ~~electronically order generate an electronic order for~~ a kit of ~~[[the]]~~ equipment that is used to synthesize the target chemical.

64. (New) A method according to Claim 2 further comprising:

displaying a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical; and

accepting user selection from the listing of a procedure, to order the target chemical and/or the reagent chemicals that are used to synthesize the target chemical.

65. (New) A system according to Claim 25 further comprising:  
means for displaying a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical; and  
means for accepting user selection from the listing of a procedure, to order the target chemical and/or the reagent chemicals that are used to synthesize the target chemical.

66. (New) A computer program product according to Claim 45 further comprising:  
computer-readable program code that is configured to display a listing of a procedure that is used to synthesize the target chemical by reacting the reagent chemicals according to the procedure, in response to the user identification of the target chemical; and  
computer-readable program code that is configured to accept user selection from the listing of a procedure, to order the target chemical and/or the reagent chemicals that are used to synthesize the target chemical.